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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/874,199	06/05/2001	Kenji Nagao	MAT-8141US	9517

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EXAMINER

MARIAM, DANIEL G

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/874,199

Applicant(s)

NAGAO, KENJI

Examiner

DANIEL G MARIAM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. Claims 1-20 are objected to because they include reference characters which are not enclosed within parentheses. Additionally, the various reference characters used in the claims appear to be confusing. Reference characters corresponding to elements recited in the detailed description of the drawings and used in conjunction with the recitation of the same element or group of elements in the claims should be enclosed within parentheses so as to avoid confusion with other numbers or characters which may appear in the claims. See MPEP § 608.01(m).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 6, 11, 15, 19, and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites the limitation “a feature amount fA2j extracted from the matrix AF applied to input pattern A2j”. How do you extract this feature amount from the matrix AF directly? A similar limitation also occurs in claims 11 and 19; claim 6 recites the limitation “. . . said matrices AF, BF maximizing between-class scatter and minimizing within-class scatter with respect to the training pattern sets A1, B1”. Does this mean maximizing between-class scatter and minimizing within-class scatter of the patterns A1 and B1 is performed simultaneously? A similar limitation also occurs in claims 15 and 20. Please clarify.

Since claims 2-5, 7-10, 12-14, and 16-18 directly or indirectly depend on claims 1, 6, 11,

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and 15 respectively, they are also rejected under 35 U.S.C. 112, second paragraph, for the same reason set forth above for claims 1, 6, 11, and 15.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 6, 11, 15, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Belhumeur, et al. (Eigenfaces vs. Fisherfaces: Recognition Using Class Specific Linear Projection).

With regard to claim 1, Belhumeur, et al. discloses a method of pattern recognition, i.e., face recognition (See for example, the Abstract), said method comprising the steps of: a first step for finding feature-extraction-matrix AF (which corresponds to S_B) of pattern set A1 and feature-extraction-matrix BF (which corresponds to S_W) of pattern set B1, said matrices AF, BF maximizing between-class scatter and minimizing within-class scatter with respect to training pattern sets A1, B1 respectively, which are sets of pair of patterns obtained from a same object, i.e., same person, but on different conditions, i.e., varying lighting conditions, for example, a second step for calculating feature-amount $fB1i$ using the feature-extracting-matrix BF with respect to typical pattern B1i of respective classes "i" of the training pattern set B1, a third step for retaining a set $\{fB1i\}$ of the feature amount $fB1i$ and the matrices AF, BF in a referential database, i.e., Harvard database and/or Yale database, and a fourth step for determining an element, among the feature amount $fB1i$ retained in the referential database, most similar, i.e.,

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closest or correlation, to a feature amount $fA2j$ extracted from the matrix AF applied to input pattern $A2j$ (See for example, sections 2.4 through 3.3, pages 10-24).

With regard to claim 6, claim 1 substantially encompasses the limitation of this claim, and thus rejected the same as claim 1. Therefore, the arguments set forth above for claim 1 are not repeated herein, but are incorporated by reference.

Claim 11 is rejected the same as claim 1 except claim 11 is an apparatus claim. Thus, argument analogous to that presented above for claim 1 is equally applicable to claim 11.

Claim 15 is rejected the same as claim 6 except claim 15 is an apparatus claim. Thus, argument analogous to that presented above for claim 6 is equally applicable to claim 15.

Claim 19 is rejected the same as claim 1. Thus, argument analogous to that presented above for claim 1 is equally applicable to claim 19. As to a recording medium which records a program of recognizing a pattern by a computer (See section 3, pp. 14-24).

Claim 20 is rejected the same as claim 6. Thus, argument analogous to that presented above for claim 6 is equally applicable to claim 20. As to a recording medium which records a program of recognizing a pattern by a computer (See section 3, pp. 14-24).

Conclusion


6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent Numbers: 4914703, 5842194, and Re.36041; and a publication to Wei discloses "308-766A Shape Analysis in Computer Vision Final Project Report: Face Recognition".

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL G MARIAM whose telephone number is 703-305-4010. The examiner can normally be reached on M-F (7:00-4:30) FIRST FRIDAY OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LEO BOUDREAU can be reached on 703-305-4607. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


DANIEL MARIAM
PRIMARY EXAMINER
June 7, 2004